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AN
E S S A Y

ON THE
NATURE AND CURE

OF THE
(S O C A L L E D)

W O R M - F E V E R.

By SAMUEL MUSGRAVE, M. D.

Fellow of the ROYAL SOCIETY,

And Corresponding Member of the Academy of
BELLES LETTRES at *Paris*.

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OF THE

WORM-FEVER.

THE Worm-Fever, as it is called, being a disorder to which Children are pretty generally liable, and frequently eluding the skill of the physician; it will not, I presume, be unacceptable to the Public, if I lay before them a method of treating that disorder, which, in several instances of my own practice, has been attended with success, and which, from the immediate relief it gives the patients, I conclude to be specifically adapted to the cure of it, and not successful by accident only.

The difficulty of curing what is called a Worm-Fever, arises in my opinion from its being frequently attributed to Worms, when the cause of the disorder is of a quite different nature. I do not mean to deny that Worms do *sometimes* abound in the human body, nor that the irritation caused by them does *sometimes* produce a Fever; but I apprehend these cases to be much more uncommon, than it is generally imagined, and that great mischief is done by treating some of the disorders of children as Worm-cases, which really are not so.

That Practitioners are frequently deceived in this respect, is sufficiently ascertained by the testimony of Dr. Hunter, who assures me that he has dissected great numbers of children,
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who have been supposed to die of Worm-Fevers, and whose complaints were of course treated as proceeding from Worms, in whom, however, there appeared upon dissection to be not only no Worms, but evident proofs of the disorder having been of a very different nature. A single case of this kind was published long ago in the Edinburgh Medical Essays by Professor Sinclair, who, after informing us, that upon opening the body, no Worms were found, goes on to observe, that “ A disappointment of this kind is “ no new thing; for all experien- “ ced Physicians know, that every “ symptom commonly produced by “ Worms, (except voiding them) “ sometimes arises from other “ causes.” If this be the case, if it be no new thing for Physicians to
prescribe

prescribe medicines against Worms to patients who have none, I am afraid it is no new thing also, under this misapprehension, to do a great deal of mischief.

The cause of these mistakes is plainly this, that people not only conclude too hastily from the existence of a single Worm, that there are many more behind ; but they often (as Dr. Sinclair also intimates) infer the existence of Worms from signs that are very equivocal and uncertain ; such as the stools containing sometimes a curdly matter, like the curd of milk, and sometimes a dark green substance, apparently full of filaments, like the conferva upon standing waters, the urine, at the same time, having a mixture of something creamy. With evacuations of this kind, if
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the patient is flushed in the face, starts frequently from his sleep, and is much disposed to rub his nose, it is concluded, that though there be no Worms completely formed, there is yet a considerable quantity of the *minera verminosa*, or *seminium verminosum*, which must be carried off by repeated purges.

It is observed, however, by Practitioners, that the disorder is much less obstinate and dangerous when the Worms appear to be completely formed, even though their number should be considerable, than when there is no evacuation of complete Worms, but only a large quantity of what is called the *seminium verminosum*: and yet in this last state, the animal being by supposition as yet in embryo, and quite invisible, cannot

cannot give so much irritation to the bowels, nor absorb so much of the chyle, as when it is perfectly formed and active ; and therefore ought not, upon this principle, to give so much disturbance to the body that it inhabits.

But further, it is remarked, that the supposed Worm-Cases do every now and then cause a forenefs, prominence and inflammation of the navel, which, if it comes to suppurate, the disorder speedily gives way ; whereas, if there is no such tendency to inflammation, it frequently proves fatal, and is at best very tedious and difficult of cure. Now, what connection can there be between a suppuration of the navel, discharging nothing but pus, and a real Worm-Case? How comes

it to pass that all the bad symptoms shall vanish, as I have seen them do, upon the coming on of the suppuration, if they had been produced by Worms lodged in the intestine, and still continuing to lodge there?

Wherever this has been the case, it seems clear that the disorder must have been only an irritation or morbid affection of the bowel, from the use of some improper food, which the strength of the constitution after a time throws out upon the external surface of the body, producing at the same time a proportionable relief of the internal and vital part. Now if this be the nature of the disorder in some few cases, it may not improbably have been so in many more, in which the efforts of Na-

ture have been checked; or, to speak less metaphorically, in which the power of Nature has been too much weakened by injudicious and repeated purges.

That purges are often found ineffectual to dislodge the Worms in children, is a fact acknowledged by those who most frequently use them in the supposed Worm-Cases. Indeed the difficulty of those cases evidently shews it, the general method of cure being by repeated purges. If this, however, was the only inconvenience, if all that purges did was to produce a little unnecessary nausea and griping, the practice might be borne with; but unfortunately, what upon the common supposition is only useless, upon the contrary and more probable supposition

supposition is pernicious and destructive. Where the irritation of the bowels is disposed to affect the brain, the proper indication, after carrying off the original offending matter, is to comfort and strengthen the bowels, instead of weakening them by frequent purges, which effectually prevent the irritating cause from discharging itself upon the surface. In children, particularly, whose nerves are tender, and in whom all irritations are readily transmitted from the intestines and other remote parts of the body to the brain, the effects of too frequently repeating them are greatly to be dreaded. I have myself seen more than one instance, where the evacuations intended to carry off Worms from the bowels, though

not immoderate in quantity, have been soon after followed by flight convulsions, and other very threatening nervous symptoms.

For this reason, unless we could be certain *a priori*, that the child we prescribe for has Worms, and Worms too in a considerable number, I must think it highly imprudent and unsafe to teaze and weaken him by purging, which, if there be really no Worms, must certainly do considerable harm. To those Worm-medicines that are not purgative, there is not the same objection, though still there is little or no benefit to be expected from them in the spurious Worm-Fever, which, as I observed before, is much the most common of the two.

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The spurious Worm-Fever, of which I come now to give an account, has, in all the instances I have seen, arisen evidently from the children having been indulged with too great quantities of fruit; though a poor cold diet of any kind may, for aught I know, occasionally give birth to it. Every sort of fruit eaten in excess, will probably produce it; and of course, that which is to be had in the greatest plenty, will, from its plenty, be the occasion of most mischief. I am convinced, however, as well from my own experience, as by the observations of my medical friends, that a great proportion of these disorders is produced by the immoderate use of cherries, which may in part be
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owing to a prevailing opinion of their innocence ; so that children are suffered even by their parents to eat freely of them, without any suspicion or apprehension of danger, which they are very seldom suffered to do of pears, plumbs, or apples.

There is no part of Nature so open to doubt and scepticism as medical subjects ; and therefore it is not to be wondered that many people should entertain a notion of the innocence of fruit to children. Fruit, like most other substances that we know, has a variety of effects upon the human body : To some it is salutary and medicinal, to others innocent, and to a third sort prejudicial. Where it is even prejudicial, the harm it does de-

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pend

pende in a great meafure upon the quantity ; and the precise quantity that will be prejudicial, it is, from the great varieties of constitution, impoffible to define. People not aware of this intricacy, can hardly be faid to reafon ill, when they infer, that what a great number eat with impunity is innocent to all. Yet further reflection would fuggelt to them, that things the moft confeffedly noxious do not in every constitution produce the fame effects. The effluvia of the fmall-pox, for inftance, will affect one man, while another, equally expofed to them, fhall efcape. It would, therefore, be a very commendable piece of difcretion, to pay a little more regard, upon this occafion, to the judgment of our forefathers,

fathers, who are known to have been particularly cautious in the article of fruit, and attributed many of the disorders of children to a too frequent or excessive use of it. And that this apprehension was not wholly unreasonable, will appear, I think, from the following reflection. We have all frequent opportunities of observing, and most of us have experienced, that fruit in no very large quantity will produce the colic; which it could not do, without being occasionally offensive and hostile to the body. Now, whatever is offensive and capable of creating pain, will, by change of circumstances, be capable of creating a disorder of a different kind; that
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is, a fever, a diarrhœa, or a stupor, and oppression of the brain.

The approach of this disorder has a different appearance, according as it arises from a habit of eating fruit in rather too large quantities, or from an excessive quantity eaten at one time. In the former case, the patient gradually grows weak and languid; his colour becomes pale and livid; his belly swells and grows hard; his appetite and digestion are destroyed; his nights grow restless, or at least his sleep is much disturbed with startings, and then the fever soon follows: in the progress of which the patient grows comatose, and at times convulsed; in which state, when the event is fatal, he dies. The pulse at the wrist, though

C quick,

quick, is never strong or hard, as indeed it very seldom is in any of the disorders of children. The carotids, however, beat with great violence, and elevate the skin, so as to be distinctly seen at a distance. The heat is at times considerable, especially in the trunk; though at other times, when the brain is much oppressed, it is little more than natural. It is sometimes accompanied by a violent pain of the epigastric region, though more commonly the pain is slight, and terminates in a coma; some degree of pain, however, seems to be inseparable from it, so as clearly to distinguish this disorder from other comatose affections.

Where a large quantity of fruit has been eaten at once, the attack

tack of the disorder is instantaneous, and its progress rapid ; the patient often passing, in the space of a few hours, from apparently perfect health, to a stupid, comatose, and almost dying state. The symptoms of the fever, when formed, are in both cases nearly the same, except that in this latter sort I have now and then seen a little purulent matter discharged by vomit and stool from the very first day. The stools in both sorts are such as I have already described ; that is, they exhibit sometimes a kind of curd, resembling curdled milk, and at other times a floating substance, of the colour and appearance of conferva, sometimes a number of little threads

and pellicles, and now and then a single Worm.

If the patient, under these circumstances, is too frequently or too strongly purged, the complaints, after a short interval of relief, return with great violence ; the coma increases, or, instead of it, convulsions come on. Where the disorder is not so severe, frequent purgings will bring on flatulent shifting pains of the sides and breast, and twitchings of the lips and face. As soon as any thing of this kind appears, it is necessary to desist immediately from purging. And as to bleeding, it is not to be thought of in any stage of the disease.

At the beginning of the illness, as the indigested matter and mucus that
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lies in the stomach and bowels has a tendency to keep up the morbid symptoms, it may be of great use to give one vomit and one purge; the vomit for a child of three or four years old, to consist of a few grains of Ipecacuanha, or, which is rather better, three or four tea spoonfuls of Ipecacuanha wine, with ten drops of the essence of Antimony. The purge for the same age may be; a powder of Jalap and Rhubarb, of each four grains, powder of Sena leaves and fine sugar, of each six grains. When this has operated properly, there will very seldom be any occasion for repeating it; and it will be sufficient, if the body is costive, to throw up every second or third day, the following clyster:

Rx *Infus*

℞ *Infus Flor. Chamæmel. unc. v. Aloes
Caballin. drachm. ss. Fiat Solutio pro
Enemate.*

But the principal part of the cure depends upon external applications to the bowels and stomach, which are the residence of the morbid cause, and from whence the mischief spreads as from a centre to the parts above and below. I have already delivered my sentiments with regard to external applications, that they have a real distinguished efficacy, and that their action is not by absorption and circulation, but directly upon the nerves. As the cause of this disorder is of a cold nature, the applications must be warm, cordial, and invigorating; and their action

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must

must be promoted by constant actual heat. The following is a prescription I have used with success :

℞ *Folior. Absinth. & Rutæ āā p. æq.*
Aq. Pur. ℥. S.

Fiat decoctum saturatissimum, quo calidè foveatur regio ventriculi & abdomen quartâ vel quintâ quaque horâ per horæ quadrantem.

Magma ex herbis coctis post fotûs usum iisdem partibus perpetuò appositum teneatur, & quoties refrixerit, aliud calidum apponatur. For internal use, the following is all I have found necessary :

℞ *Aq. Cinnam. spir.*
 — *Cinnamom. ten āā.*
unc. fs.

Ol. Amygdal. dulc. unc. ifs.
Syr. Balsam. drachm. iij.

Misce,

Misce, & tempore usûs fortiter concutiantur in phialâ. Capiat pro ratione ætatis drachm. ij. ad drachm. vj. tertiâ quaque horâ.

If any nervous symptoms should come on or remain after the disorder is abated, they will soon be removed by giving a pill of four grains of *Asa fœtida* once or twice a day. The benefit the children find from this, makes them, instead of loathing, soon grow fond of it, so as to call for it of their own accord, if it is not brought them, and sometimes prefer it to an orange or a sweetmeat.

It was before observed, that the diagnostics of Worms are very uncertain, which implies not only that they are sometimes suspected where they have no existence; but on the
contrary

contrary also, that they sometimes exist where they are not suspected. Hence it becomes a very natural question, whether, if a real Worm-Case should be treated in the manner here described, there would be any risque of its being increased by such treatment? or of its gaining ground by loss of time? My opinion upon both these questions is clearly, No; and that in cases, where we will suppose the bowels to be really full of Worms, this method, with some slight alterations, is greatly preferable to those which are commonly used. As Worms either find the constitution weakly, or very soon make it so, the frequent repetition of purges, particularly mercurials, cannot but have a pernicious effect

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upon

upon children. Bearsfoot is still more exceptionable, being in truth to be ranked rather among poisons than medicines. Worm-feed, and all kinds of bitters are too offensive to the palate and stomach to be long persisted in. The powder of Coralline creates disgust by its quantity ; and the infusion of pink-root is well known to occasion now and then vertiginous complaints and fits: and though some people assert, that these fits are owing to the contorsion of the Worms in the bowels, when the infusion is not sufficiently strong to kill or stupefy them ; others, and particularly Dr. Lining, are of a contrary opinion, and impute the bad effects of it to an over-dose. In this diversity of opinions, who will positively

positively undertake to say, that the accident shall not happen? It is commonly, therefore, with some reluctance that parents suffer it to be administered to their children, who have on their parts, on account of its sickly and earthy taste, an equal aversion to taking it. But fomenting the belly night and morning with a strong decoction of Rue and Wormwood, is a remedy very easy to be administered, attended with no danger, and, instead of weakening the bowels, has an evident tendency to corroborate them; which circumstance alone contributes, perhaps, more than any thing else to the destruction of Worms, the vigour of the contained or parasitical animal being overcome by the digestive powers

of the Viscera in which it is lodged. After the fomentation, it may be of use to anoint the belly with a liniment composed of one part essential oil of Rue, with two parts of a decoction of Rue in sweet oil. Forestus, in his Observations, Lib. xxi. 33. mentions a remarkable cure effected by an ointment in which the gall of a bull [the text has it, *fel Auri*] was a principal ingredient. Where the decoction or essential oil of Rue are not readily to be procured, an ointment strongly impregnated with this or ox's gall, would, I suppose, be very efficacious. Of internal medicines, the best is Afa fœtida, with an aloetic pill or two at proper intervals.

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The diet of children disposed to Worms should be warm and nourishing, consisting in part at least of animal food, which is not the worse for being a little seasoned. Their drink may be any kind of beer that is well hopped, with now and then a small draught of porter or negus. A total abstinence from butter is perhaps not so necessary, as the generality of the world imagine. Hungry poor cheese must by all means be avoided; but rich pungent cheese, in a moderate quantity, is particularly serviceable. In the spurious Worm-Fever, the patient should be supported occasionally by small quantities of broth; and at the close of it, when the appetite returns, the first food given should be of the kinds above recom-

recommended, though in a very small quantity. As the patient grows stronger, the quantity may be increased, taking care, if possible, to avoid indigestion; or, if it arises, correcting it with the following powder :

*Rx Rhubarb. pulv. Magnes. alb. āā gr. v.
Spec. Aromat. gr. ij. Misce.*

The diet here directed will, perhaps, be thought extraordinary, as the general idea is at present, that, in the management of children, nothing is so much to be avoided as repletion and rich food. It is, no doubt, an error to feed children too well, or to indulge them with wine and rich sauces; but it is equally an error to confine them to too strict or too poor a diet, which
weakens

weakens their digestion, and renders them much more subject to disorders of every kind ; but particularly to disorders of the bowels. In regard to the spurious Worm-Fever, if it be true that acid fruits too plentifully eaten, are the general cause of it, it follows as a consequence, that a warm nutritious diet, moderately used, will most effectually counteract the mischief, and soonest restore the natural powers of the stomach. Besides, if the disorder does not readily yield to the methods here directed, as there are many examples, and some within my own experience, of its terminating by an inflammation and suppuration of the navel, it is highly adviseable to keep this probability in view, and by a moderate

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derate allowance of animal food,
to support those powers of Nature,
from which only such a happy cri-
sis is to be expected.

F I N I S.